

REMARKS

Claim 8 has been rewritten in independent form and further includes the requirements of claim 6.

Claims 1-35 stand rejected under 35.U.S.C. 103(a) as unpatentable over US 5,221,534 (DesLauriers et al.) in view of US 6,403,070 (Pataut et al.) and further in view of US Patent 5,750,096 (Guskey). Additionally, Claims 1-35 stand rejected under 35 U.S.C. 103(a) as unpatentable over Pataut et al. in view of US 6,986,885 (Matti et al.).

Pursuant to this invention it was found that by employing specified proportions of a particular mixture of carrier liquid and structurant i.e., a carrier liquid comprising a mixture of a hydrocarbon oil and an aromatic ester oil, and a structurant comprising a di-or triblock alkylene/arylene block copolymer and wax, one could produce antiperspirant compositions in the form of soft solids which both reduced the problem of syneresis and maintained acceptable antiperspirant efficacy. In the subject compositions, the total amount of auxiliary hydrophobic carrier oil, if present (auxiliary hydrophobic carrier oil being but an optional component) is not greater than 15% by weight of the total weight of the carrier liquid.

Pataut et al. is directed to anhydrous compositions comprising at least one deodorant active agent, at least one block copolymer, at least one fat-absorbing substance, and at least one synthetic oil. Exemplary of the fat-absorbing substances disclosed by the citation are hollow porous particles, talcs, starches, starch derivatives, clays, silicas, polyolefins, polystyrenes and teflons. At column 1, lines 31 to 48, the citation notes:

The use of at least one gelling agent comprising styrene/elastomer block copolymers in mineral oils has previously been recommended for deodorant sticks in Patent Application WO 94/12190, the disclosure of which is incorporated herein by reference. However such sticks may leave an undesirable greasy residue on the skin and may not exhibit at least one of the desired advantages mentioned above.

The inventors have discovered that when an effective amount of at least one fat-absorbing substance and an effective amount of at least

one synthetic oil is included with at least one deodorant active agent and at least one block copolymer derived from (i) at least one monomer of styrene and (ii) at least one thermoplastic entity chosen from thermoplastic monomers and thermoplastic comonomers to form a deodorant composition, it may be possible to significantly improve the deodorant cosmetic composition and it may be possible to obtain at least one of the above identified desired properties... [Emphasis added.]

At column, 1 lines 26 to 30, the "desired properties" are identified as stability, homogeneity, rheological properties on replication, not leaving a visible residue, and leaving skin soft to the touch. Thus, the focus of the citation is on the inclusion of a fat-absorbing substance in deodorant compositions that contain diblock, triblock and other block copolymers as therein described. Pataut et al. does not teach aromatic ester oil in the deodorant composition therein described.

DesLaueriers et al. discloses compositions that comprise one or more health and beauty aid components contained in a gel comprising a hydrocarbon oil (e.g., mineral oil) and certain blends of di- and triblock copolymers. The block copolymers being therein described as forming "three-dimensional networks" or gels through physical crosslinks. See column 3, lines 32 to 34. Thus, the focus of DesLaueriers et al. is on the use of the disclosed block copolymers as cross-linking agents. At column 3, lines 24 to 32 the patent states:

According to this invention it has been discovered that certain thermoplastic rubber copolymers are particularly suitable as gelling agents for cosmetic applications. It was discovered in this work that certain gels exhibit syneresis wherein the separation of liquid from the gel by contraction occurs by virtue of the concentration of the insoluble block present in the triblock copolymer. The higher the concentration of the insoluble block, as exemplified by styrene, the more phase separation and crosslinking will occur. However, according to this invention it has further been discovered that the amount of syneresis which occurs can be mixing such systems with polymer blends such as diblock copolymers and with triblock copolymers which do not exhibit syneresis.

According to DesLaueriers et al., the particular block copolymer blends therein disclosed provide a more flexible composition that is less susceptible to breaking or phase separation, the di- and triblock polymers each having a combination of hard and soft segments that is characteristic of materials recognized as elastomers. While, DesLaueriers et al. does disclose the addition of benzoate C12-C15 ester, it is in the context of the use of this ingredient as a solvent to dilute

its gels and form lotions and other flowable compositions. Moreover, there is nothing in the citation that discloses or addresses the formulation of antiperspirant compositions, nor the claimed combination of block copolymer, structurant and carrier liquid as a means of providing compositions having reduced syneresis and acceptable efficacy.

Issues related to the use of elastomer-type materials in antiperspirant compositions is noted in Mattai et al.

Two major problems have been observed when the use of elastomer materials is included in soft solid formulations. The first problem is reduction in efficacy due to the formation of an occlusive elastomeric film which prevents the active from diffusing into the sweat duct. The second problem is the consistency of the product as evidenced by which viscosity and elastic behavior when applied to the surface of the skin. In order to reduce this high viscosity, emollients and solvents have to be added which may negatively impact efficacy of the deodorant and/or antiperspirant.

Thus, while DesLauriers et al. provides a generic disclosure of the use of elastomeric block copolymers in antiperspirant compositions, as the later Mattai et al. citation points out, incorporating elastamers in antiperspirant compositions negatively impacts deodorant efficacy. The compositions disclosed by Mattai comprise a soft solid cosmetic comprising a particular dimethicone/vinyldimethicone crosspolymer made by reacting a polymethylhydrogensiloxane with an alpha,omega-divinylpolydimethyl siloxane; polyethylene beads having a particular density; a volatile silicone; an emollient; and an antiperspirant active. In short, Mattai et al. teaches the use of a particular silicone elastomer which it characterizes as exhibiting "improved efficacy and stability as compared to other formulations with different types of elastomers", and away from compositions containing the subject block copolymers. Moreover, unlike the subject compositions wherein the total amount of auxiliary hydrophobic carrier oil, if present, is not greater than 15% by weight of the total weight of the carrier liquid, the compositions disclosed by Mattai contain 40-75% of volatile silicone.

As previously noted, the data in the subject application demonstrates that aromatic ester oil and wax are critical components to producing a composition containing both reduced syneresis and acceptable deodorant efficacy. Applicants

refer to their Amendment of January 24, 2006, and the discussion provided therein regarding the examples and comparative examples set forth in the subject application and the conclusion to be drawn from that data that (a) the objective of reducing syneresis while maintaining acceptable antiperspirant efficacy was attained by a specific combination of block copolymer, wax, hydrocarbon oil and aromatic ester oil components and (b) that the data demonstrates just how easy it is to fail one or the other of these objectives by elimination of one or more of these components. This can be seen from a summary of Table 1 and the first 3 entries from Table 2

Ref	Wax	Co-polymer	Hydro-carbon oil	Aromatic Ester oil	Syneresis	Efficacy	Comment
CP1	√				Fail		Other oil
CP2	√				Fail		Other oil
CP3				√	Fail		Other polymer
CP4	√			√	Fail	Pass	
CP5		√	√	√	Pass	Fail	+ other polymer
CP6	√	√	√		Fail		
CP7	√	√	√		Fail		
CP8		√	√	√	Fail		
CP9	√	√	√		Fail		
CP10	√	√	√		Fail		
CP11	√	√	√		Fail		+ other oil
CP12	√	√	√		Fail		+ other oil
Ex 1	√	√	√	√	Pass	Pass	
Ex 2	√	√	√	√	Pass	Pass	
Ex 3	√	√	√	√	Pass	Pass	

For actual compositions, components, and component amounts, please refer to the subject application.

The current Office Action suggests that the selective combination of DesLaueriers et al. and Pataut et al. would be obvious, seemingly, because each citation discloses the use of block copolymers. The discussion regarding microcrystalline cellulose is vague and incorrect, in that microcrystalline cellulose, while a thickening agent, it is not an organic wax. It is respectfully submitted that there is nothing that would motivate one skilled in the art reading DesLaueriers et al. and Pataut et al. to combine the citations or, even if combined, to select the particularly combination of structurant, block copolymer and carrier oils as required by the subject claims to provide a composition with both reduced syneresis and acceptable efficacy.

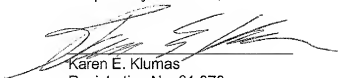
As noted in the prior amendment, Gusky is directed to solid sticks recognized to be firm compositions rather than soft solids. The sticks are disclosed as having a product hardness of at least 500 gram force, which is representative of self-supporting

sticks. Self supporting sticks do not have the problem of being dispensed through narrow slits or apertures. The citation is not relevant to solving the problem of controlling syneresis in soft solids, and one skilled in the art looking to solve this problem would not be motivated to combine same with either Patuat et al. or DesLauriers et al.

In light of the above amendments and remarks, it is respectfully requested that the application be allowed to issue.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Karen E. Klumas', is written over a horizontal line.

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